



The Future of CBER

*Tenth Annual Surviving the Challenges of FDA and
Other Regulatory Authorities' GMPs*

March 22-24, 2004

Basel, Switzerland

Mark A. Elengold

Deputy Director, Operations

Center For Biologics Evaluation and Research

Food and Drug Administration

History of Biological Products Regulation



1798

Marine Hospital
Service Original
Public Health
Agency

1850

Louis Pasteur
(Rabies Vaccine)

1886

Heat-Killed
Vaccines

1888

Roux + Yersin
(Diphtheria
Toxin)

1894

Public Health
Labs
Produce
Diphtheria
Antitoxin

1902

Biologics
Control Act

Smallpox
Vaccination

1800

Koch
Isolated
Anthrax
Bacillus

1878



Public Service
Lab Of Hygiene
J. Kinyoun

1887



1890

Antitoxins

1901

13 Children Died of
Tetanus due to
Contaminated
Diphtheria Antitoxin



History of Biological Products Regulation (continued)



1906

The Food and Drug Act

1930

National Institute of Health

1938

Food and Drug Cosmetic Act Section 505

1941

Cohn Fractionation of Blood

1948

National Microbiological Institute

1912

Public Health Service Created

1937

Division of Biologics Control

1940

Rh Blood Group System

1944

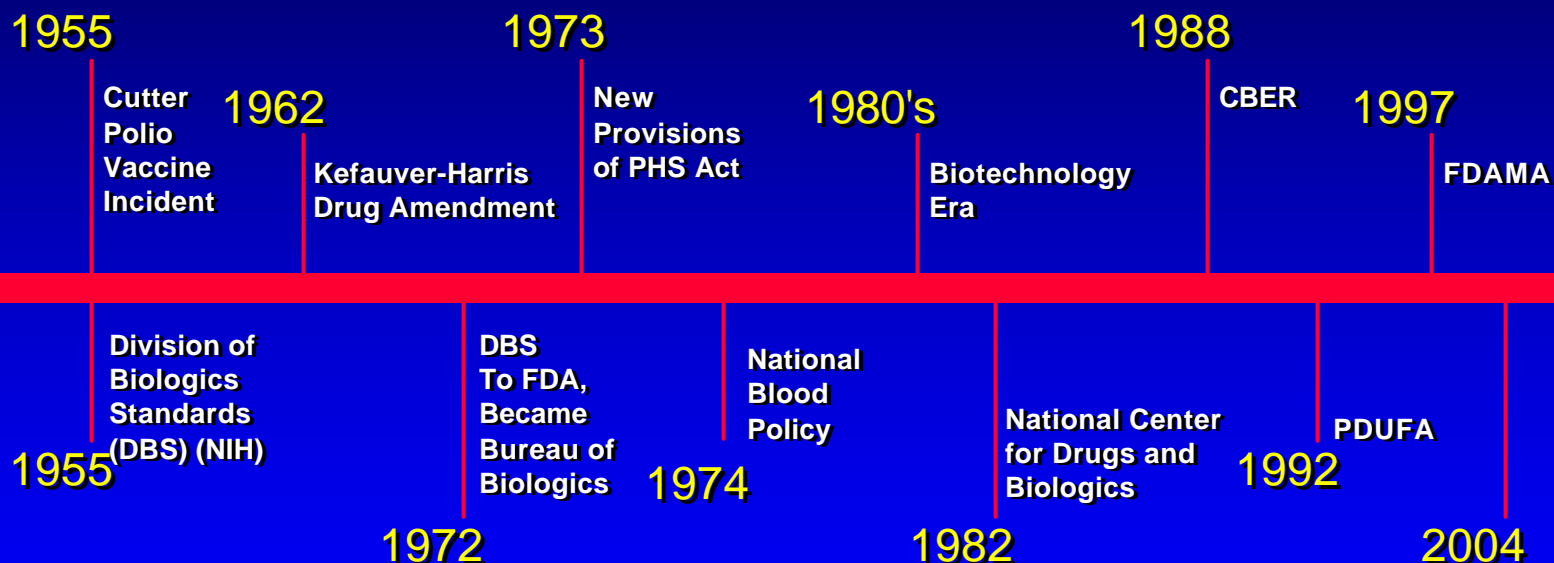
The Public Health Service Act (Lab of Biologics Control)

1950

1st Live Polio Vaccine in Humans



History of Biological Products Regulation (continued)



Shepherding Safe and Effective Products

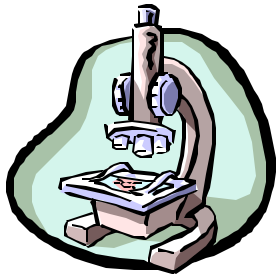
Regulatory Research

FDA

Bench

Bedside

Marketplace



BASIC

**Translational
Research**



**NIH
Academia
Industry**



APPLIED

**Pharmaceutical
Research**



Industry

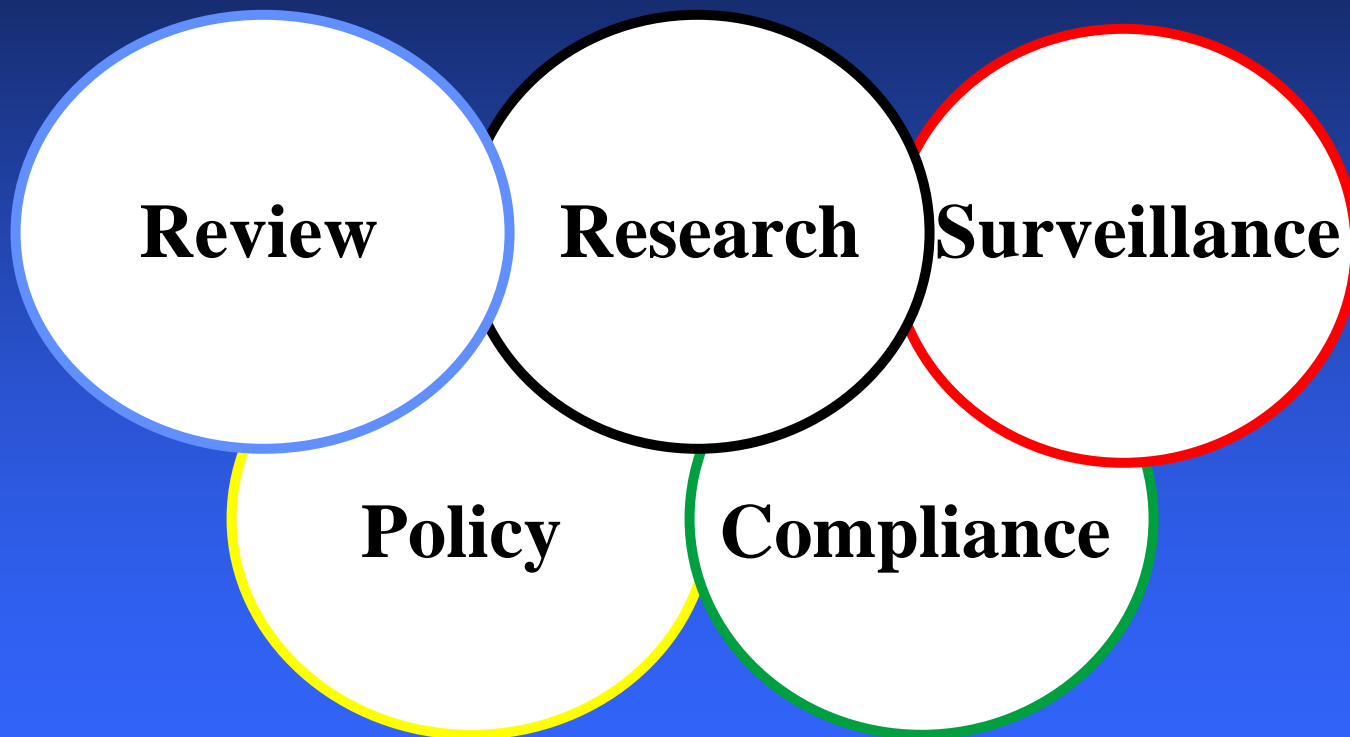


SAFETY & QUALITY



CBER Regulation

Based on Sound Science, Law, and Public Health Impact



Vision for CBER

INNOVATIVE TECHNOLOGY ADVANCING PUBLIC HEALTH

- *Protect and improve public and individual health in the US and, where feasible, globally*
- *Facilitate the development, approval and access to safe and effective products and promising new technologies*
- *Strengthen CBER as a preeminent regulatory organization for biologics*



Commissioner's Strategic Plan

- **Science Based Risk Management**
- **Better informed consumers**
- **Patient Safety**
- **Counter-terrorism**
- **Strong FDA**
 - **Personnel, processes, infrastructure**

All highly pertinent to CBER and our products & CBER actions will support Plan.



Additional CBER Cross-Cutting Priority Approaches to FDA Goals

- *Enhance outside collaboration & input ; “outside in” & “inside out”; e.g. sabbaticals, clinical practice, blood banking program*
- *Strengthen the base for & performance of CBER and collaborative science & review*
 - *Includes epidemiologic, clinical and risk sciences and cutting across product and expertise areas*
 - *E.g. CBER Grand Rounds*



Additional CBER Cross-Cutting Priority Approaches to FDA Goals

- *Strengthen the base for & performance of CBER and collaborative science & review (continued)*
 - Focus on stumbling blocks on “critical path” to product development and new technologies
 - Enhanced interactions, collaboration and leveraging with NIH, other regulatory authorities and other partners
 - Continue increases in transparency, input, tracking, focus and review.
- *Strengthen emergency response/crisis management*



CBER 2004: New Initiatives

- **Efficient Risk Management**
 - **Enhanced Review Management and Processes**
 - Review Template Initiative
 - *Enhance consistency, quality of review and submissions as well as facilitating electronic processes*
 - Review of Review Initiative
 - *Identify best practices/management and prepare for Agency-wide quality initiatives*



CBER 2004: New Initiatives

(continued)

- **Efficient Risk Management**

- **GMPs for 21st Century**

- **CBER serves on Steering Committee**
 - **CBER already had adopted many “new” practices**
 - **E.g.: scientists/clinicians on inspections, specialized teams and training, risk based prioritization, Center review of warning letters**
 - **Additional Center Initiative: enhance inspectional integration/coordination with product review process**



CBER 2004: New Initiatives

(continued)

- **Better Informed Consumers**
 - **CBER Communication Strategic Plan**
 - **“CBER Communicates”: enhance CBER communication to health care consumers through appropriate media at appropriate health literacy levels**



CBER 2004: New Initiatives

(continued)

- Patient Safety

- Tissue Safety System

- Finalization of Donor Suitability & Good Tissue Practice Rules
 - Creation of Tissue Safety Team
 - Interdisciplinary: OCTGT, OBE, OCBQ, OITM
 - Active Surveillance
 - Adverse Event Reports and Analysis
 - Training, outreach, inspection and compliance



CBER 2004: New Initiatives

(continued)

- **Counterterrorism**

- **Bioshield related guidance and evaluation**
- **New technologies**
 - E.g. platform technologies for vaccines and diagnostics (critical path initiative)
- ***CT Product Safety Plan***
 - Defined measures to reduce potential vulnerabilities of CBER biologic products essential to the response to terrorist events



CBER 2004: New Initiatives

(continued)

- **Strong FDA**

- **Management Training Initiative**
- **Risk Assessment, Management and Communication Training for Reviewers**
- **External review/input re: broad scientific programs, needs and opportunities**
- **Global Strategic Plan**
 - **possible Global Vaccine Assistance Pilot Program (GVAP)**



CBER 2004: Cross-cutting Areas

- *Emerging Infectious Diseases*
 - *Products for prevention, treatment, diagnosis*
 - *Protection of blood, cell, vaccine and tissue safety*



CBER 2004: Cross-cutting Areas

(continued)

- *Critical Pathways Technology*

- *Assist new technology development and nascent fields— define and facilitate product development “critical paths”*

(e.g. gene therapy, tissue engineering, stem cells, new vaccine technologies, blood “substitutes”, pathogen inactivation & detection)

- *Assure internal expertise, appropriate partnerships with industry, academic/scientific community and consumers*



CBER 2004: Cross-cutting Areas

(continued)

● Critical Pathways Technology (continued)

- *Assist new technology development and nascent fields—define and facilitate product development “critical paths”*
(e.g. gene therapy, tissue engineering, stem cells, new vaccine technologies, blood “substitutes”, pathogen inactivation & detection)
 - Identify “roadblocks”, scientific and regulatory, and develop appropriate solutions – e.g. VIG potency assay, rapid bacterial testing methods
 - Guidance, standards, outreach, creative approaches to product development, safety/efficacy assessment and review
 - Improved public risk communication



Tissues, Cells and Related Products

- **Conventional Banked Tissues for Transplantation**
- **Gene Therapy**
- **Reproductive Cells**
- **Human Reproductive and Therapeutic Cloning**
- **Somatic Cell Therapies, e.g. Stem cells**
- **Xenotransplantation (separate Action Plan)**



Cell and Tissue Therapies

- Hematopoietic stem cells
- Embryonic stem cells
- Expanded lymphocytes
- Assisted reproductive technologies
- Tissue engineering
- Pancreatic islet cells
- Hepatocytes
- Cartilage
- Xenotransplantation

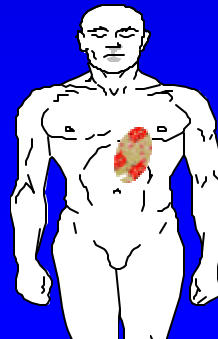


Biological – Medical Device Combination Products

**Biological
Products**

**Combination
Products**

**Medical
Devices**

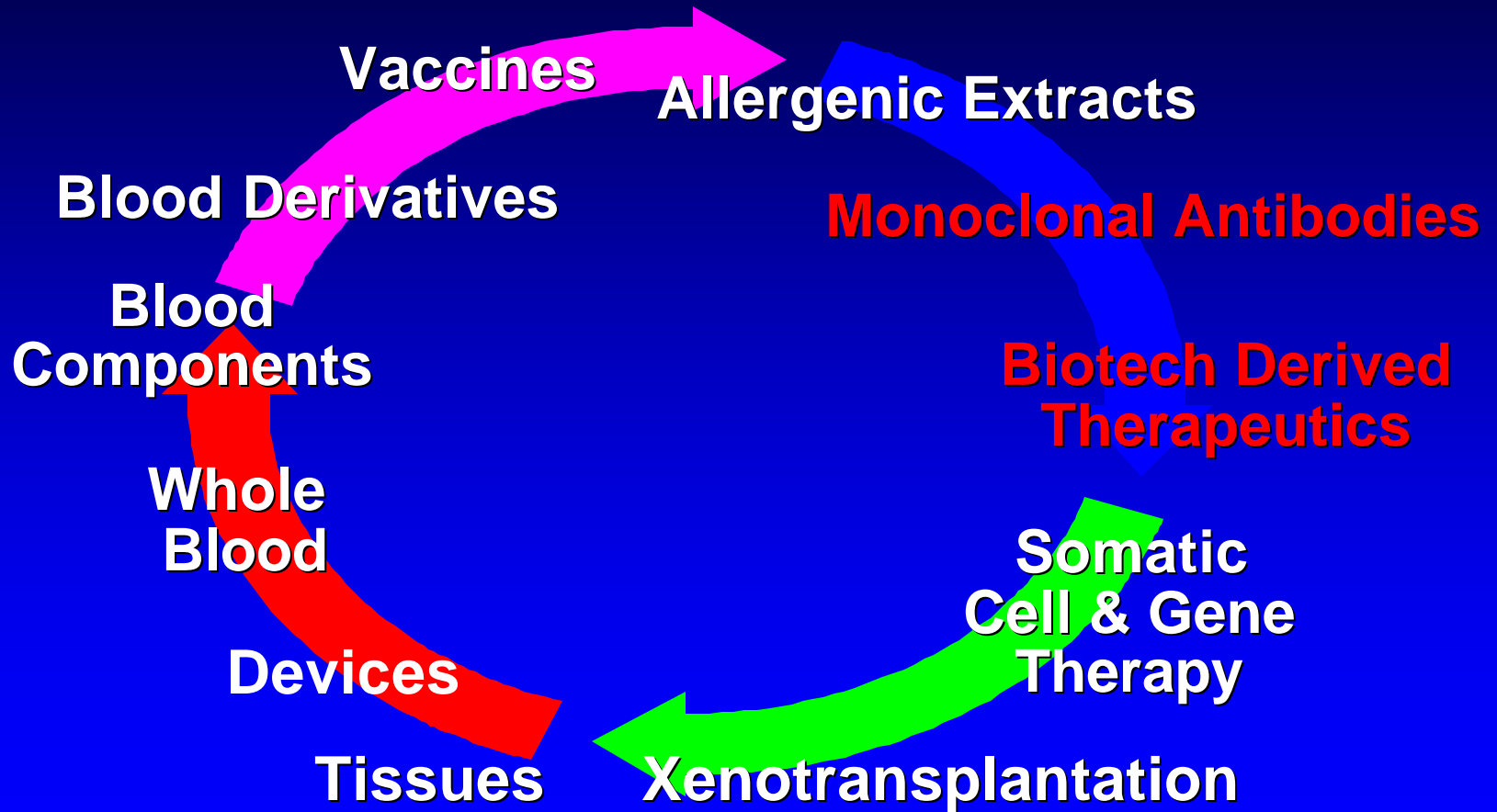


Xenotransplantation Initiatives

- **Xenotransplantation Action Plan (XAP)**
- **Secretary's Advisory Committee on Xeno (SACX)**
- **Xeno Sub-Committee of the Biological Response Modifiers Advisory Committee (BRMAC)**
- **National Xenotransplantation Registry and Database**



BIOLOGICAL PRODUCTS REGULATED BY CBER



What Went

Monoclonal antibodies

**Cytokines, growth factors,
enzymes, interferons --
(including recombinant versions)**

**Proteins intended for therapeutic
use that are extracted from
animals or microorganisms
(except clotting factors)**

**Other therapeutic
immunotherapies**



What Stayed

Monoclonal antibodies, cytokines, growth factors, or other proteins when used solely as an ex vivo constituent in a manufacturing process / when used solely as a reagent in the production of a product that is under the jurisdiction of CBER

Viral-vectored gene insertions (i.e., “gene therapy”)

Products composed of human or animal cells or from physical parts of those cells



What Stayed (continued)

Plasma expanders

Allergen patch tests

Allergenics

**Antitoxins, antivenins, and
venoms**

In vitro diagnostics

Vaccines

**Toxoids and toxins intended for
immunization**



The Products

<u>PRODUCT</u>	<u>CBER</u>	<u>CDER</u>
IND	1748	1162
IDE	163	1
BLA (approved)	1259	59
BLA (pending)	36	9
NDA (approved)	60	3
NDA (pending)	1	0
PMA (approved)	18	0
PMA (pending)	3	0
510k (approved)	671	0
510k (pending)	26	0
ANDA (approved)	8	0



The People

Office	FTEs	Bodies	Total
OD	0	2	2
OM	1	1	2
OCTMA	2	1	3
OBE	6	6	12
OIM	0	2	2
OCBQ	2	16	18
OTRR		161	161
Buy-Back	8	0	8
PDUFA	8	0	8
TOTAL	27	189	216



Web Site

- <http://www.fda.gov/cber/transfer/transfer.htm>
- **Links**
 - Notification Letter
 - List of Approved Products Transferring to CDER
 - Lists of Products Transferring and Remaining, Organized by File Type and Tracking Number



We're Here to Help You!

WWW.FDA.GOV/CBER

- **Email CBER:**

- **Manufacturers:**

- matt@cber.fda.gov

- **Consumers, health care professionals:**

- octma@cber.fda.gov

- **Phone:**

- **301-827-1800**

